

# Testul 4

1.  $14\underline{7}; 51; \underline{44}; \underline{18}; 6; 93; \underline{72}; \underline{0}; 11$

2.  $\overline{43a} : 5 \Rightarrow a = \{0, 5\}$

$\overline{43a} = \{430; 435\}$

3.  $(\overline{7ab} - \overline{1ba}) : 3$

$$\begin{aligned} \overline{7ab} - \overline{1ba} &= 7 \cdot 100 + a \cdot 10 + b - 1 \cdot 100 - b \cdot 10 - a = \\ &= 700 + 10a + b - 100 - 10b - a = 600 + 9a - 9b = \\ &= 3 \cdot (200 + 3a - 3b) : 3 \Rightarrow (\overline{7ab} - \overline{1ba}) : 3 \end{aligned}$$

4.  $\overline{487x} : 2 \Rightarrow x \neq \{0, 2, 4, 6, 8\}$

$\overline{487x} : 5 \Rightarrow x \neq \{0, 5\}$

$\Rightarrow x = \{1, 3, 9\}$

$\overline{487x} = \{4871; 4873; 4879\}$

5.  $\overline{32x} : 5 \Rightarrow x = \{0, 5\}$

$\overline{32x} : 2 \Rightarrow x = \{0, 2, 4, 6, 8\}$

Nr. sunt:  $320; 322; 324; 325; 326; 328$

$S = 320 + 322 + 324 + 325 + 326 + 328 = 1945$

6. I  $65^{2001} = 65 \cdot 65^{2000} = (7^2 + 4^2) \cdot 65^{2 \cdot 1000} =$   
 $= (7^2 + 4^2) \cdot (65^{1000})^2 = 7^2 \cdot (65^{1000})^2 + 4^2 \cdot (65^{1000})^2 =$   
 $= (7 \cdot 65^{1000})^2 + (4 \cdot 65^{1000})^2$

II  $65^{2001} = 65 \cdot 65^{2000} = (64 + 1) \cdot 65^{2 \cdot 1000} = (8^2 + 1^2) \cdot (65^{1000})^2 =$   
 $= 8^2 \cdot (65^{1000})^2 + (65^{1000})^2 = (8 \cdot 65^{1000})^2 + (65^{1000})^2$